

**ENVIRONMENTAL INFORMATION
ASSOCIATION**



ASBESTOS REGULATORY SEMINAR



EPA and OSHA Asbestos Regulatory Information

ASBESTOS

**BACKGROUND, HISTORY, USES
AND DEVELOPMENT OF THE
REGULATIONS**



EXTENSIVE USE, EXTENSIVE LEGACY

We have used asbestos commercially for about 130 years in the U.S. – as much as 800,000 tons per year.

Most of it went into buildings – thousands of different products.

Most of that is still in buildings.

It is still installed legally today!



Asbestos Containing Material (ACM), a proven human carcinogen, exists in millions of buildings today in the United States. When those buildings are renovated or demolished, asbestos fibers become airborne. This results in an occupational exposure to the workers involved, and when waste is generated or handled, an ambient air exposure to the environment which may endanger the public health. Therefore this disturbance is heavily regulated by both EPA and OSHA.

Asbestos is the most heavily litigated hazardous material that we have to deal with in the hazardous material control industry.

As a result of all this, it is also the most heavily regulated hazardous material that we have to deal with.

Right or wrong, asbestos has the ability to put even the largest multi-billion dollar corporations into bankruptcy. There are about 250,000 lawsuits pending right now in the court systems in this country.

**WHY IS ASBESTOS
FOUND SO COMMONLY IN
BUILDING MATERIALS?**



PROPERTIES OF ASBESTOS

- HEAT RESISTANCE
- INCOMBUSTABILITY
- SOUND ABSORPTION
- FRICTION RESISTANCE
- MECHANICAL STRENGTH
- WEARABILITY
- WATER RESISTANCE
- ELECTRICAL RESISTANCE
- CHEMICAL RESISTANCE
- BACTERIAL RESISTANCE
- BIOLOGICAL RESISTANCE

In addition to all that, it was the most inexpensive additive available to accomplish any or all of these needs!



HEALTH EFFECTS

- VERIFIED HUMAN CARCINOGEN
- HUGE POPULATIONS EXPOSED IN:
 - MANUFACTURING
 - APPLICATION
 - CONSTRUCTION / DEMOLITION
- MANY ILLNESS CASES AND DEATH -BY 1970
- LAWSUITS
- CONGRESSIONAL ATTENTION



DECLINE OF USE

- OSHA AND EPA BEGAN REGULATING ACM ABOUT 1970
- EPA BANS HIGH RISK ACM BY 1978 (TSI & SPRAY-ON)
- PROPERTY DAMAGE LIABILITY DEFINED BY ABOUT 1978
- GENERALLY WENT OUT OF USE BY 1980
- REMAINS IN MOST BUILDINGS TODAY
- SUBSTANTIAL HEALTH THREAT TO THE CONSTRUCTION INDUSTRY

REGULATORY DEVELOPMENT

- ASBESTOS REGS INTENSIFIED BY MIDDLE 80'S
- REGULATED THRU TSCA IN 1986 AS AN "EMERGENCY RESPONSE ACT" (AHERA)
 - CONGRESSIONAL INTENT WAS TO INSPECT ALL BUILDINGS, IDENTIFY ACM, MANAGE SAFELY
 - TO HAVE BEEN IMPLEMENTED FIRST IN SCHOOLS, THEN GOVERNMENT BUILDINGS, THEN PUBLIC AND COMMERCIAL
- NEW OSHA CONSTRUCTION 1986 (OSH ACT)
- NEW NESHAP 1990 (CLEAN AIR ACT)
- NEW OSHA CONSTRUCTION 1994 (OSH ACT)
- NEW MAP 1994 (ASHARA)

BASIC REGULATIONS

SINCE 1994, WE HAVE 4 BASIC REGULATIONS THAT WORK TOGETHER TO ACCOMPLISH THE CONGRESSIONAL INTENT OF ASBESTOS MANAGEMENT:

1. AHERA (Identification & Management in Buildings)
2. NESHAP (Demolition, Renovation & Disposal of Waste)
3. MAP (Certified People in occupied buildings)
4. OSHA (Worker Protection)

THEY ARE DIFFERENT – THEY ARE COMPLIMENTRY

(1, 2, & 3 are EPA rules for the protection of the public & the environment, and 4 is OSHA protection of workers from exposure)



High Risk = Friable and TSI ACM Heavily Regulated

EPA NESHAP:

-RACM

EPA AHERA:

-Response Action

EPA MAP:

-Response Action

OSHA:

-PACM (Class I Material)



FEDERAL ASBESTOS REGULATIONS

OSHA

- OSHA 29 CFR 1926.1101
- OSHA 29 CFR 1910.1001
- RESPIRATORY PROTECTION 29 CFR 1910.134

EPA

- NESHAP 40 CFR 61, Subpart M
- AHERA 40 CFR 763, Subpart E
- WORKER PROTECTION 40 CFR 763, Subpart G
- ASHARA (Model Accreditation Plan)

SCOPE & APPLICABILITY OF AHERA



AHERA TELLS US WHAT IS ASBESTOS AND WHAT IS NOT, AND REQUIRES SAFE MANAGEMENT OF ACM IN BLDGS. AHERA DOES NOT REQUIRE REMOVAL !

- Applies in schools
- Requires identification of all ACBM
- Requires safe management of ACBM
- Industry standards for inspection & management
- Contains the Model Accreditation Plan (appendix C)



SCOPE & APPLICABILITY OF MAP

The Model Accreditation Plan is an EPA regulation that came out of AHERA, and as such, it applies to Response Actions (friable abatement), inside buildings.

- Applies in all buildings except a single residential building no larger than 10 units. All houses are exempt.

- Requires certification of inspectors
- Requires certification of persons who design or conduct response actions:
 - Project Designers
 - Contractor/Supervisors
 - Workers

SCOPE & APPLICABILITY OF NESHAP

THE NESHAP REQUIRES CONTROLLED REMOVAL OF ASBESTOS BEFORE DEMO OR RENOVATION, THEN REGULATES THE GENERATION, MANAGEMENT AND DISPOSAL OF THE WASTE STREAM. NESHAP IS WASTE MANAGEMENT!

- Applies to all facilities except a single residential building having 4 living units or less.

REQUIRES A THOROUGH INSPECTION BEFORE DEMOLITION OR RENOVATION DISTURBANCE

- Requires removal of RACM about to be disturbed by **DEMOLITION** or **RENOVATION**
- Requires prior notification to EPA or delegated agency
- Requires proper management thru & after disposal
- No visible emissions



SCOPE & APPLICABILITY OF OSHA

OSHA DOES NOT REQUIRE ASBESTOS WORK TO BE DONE, BUT REGULATES THE WORK PROCEDURES IF AN EMPLOYER DOES ASBESTOS WORK. OSHA GIVES US WORK PRACTICES!

- Applies wherever a worker works who may be exposed to asbestos
- Requires employers to protect employees
- The building owner is an employer
- The building owner notifies the contractor (employer)
- A work specification regulation for contractors
- Generally applies even when EPA does not



REGULATORY "RULE OF THUMB":

WHEN ACM IS DISTURBED

AHERA may or may not apply.

NESHAP may or may not apply.

MAP may not apply.

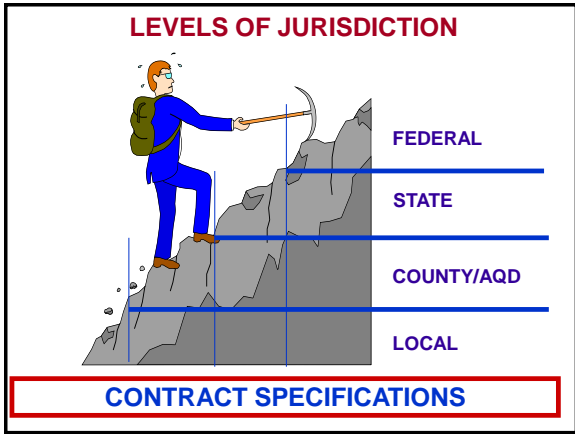
But:

OSHA WILL ALWAYS APPLY!



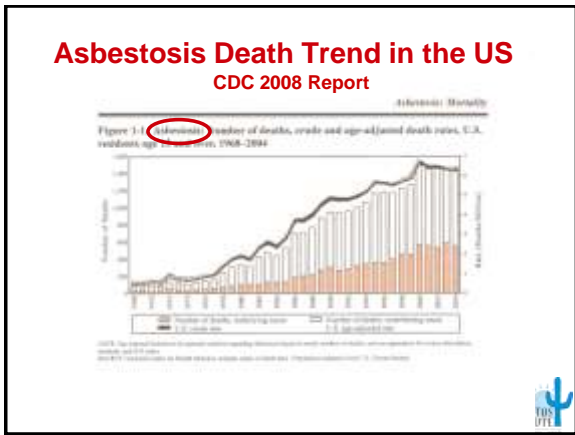
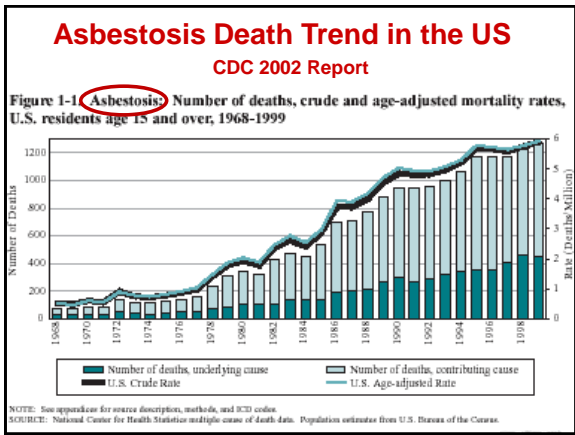
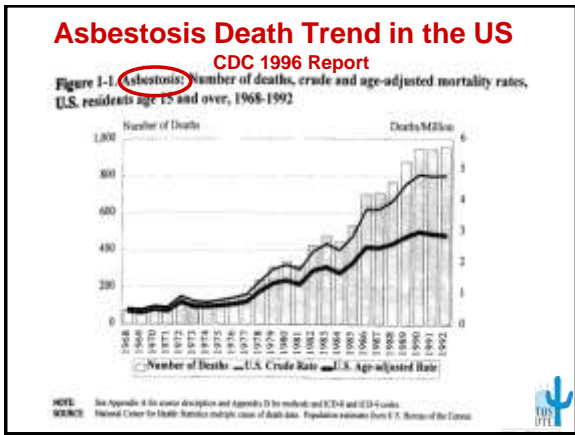
APPLICABILITY OF FEDERAL REGULATIONS BY FACILITY TYPE

	OSHA	NESHAP	AHERA	MAP
SCHOOLS	X	X	X	
PUBLIC/COMMERCIAL/INDUSTRIAL	X	X		X
RESIDENTIAL	X	?		
NO BUILDING	X	?		
MAINTENANCE	X	?		

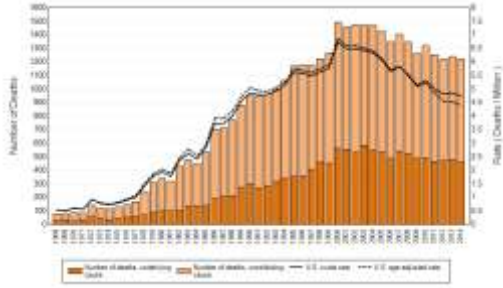


Health Effects of Asbestos Exposure

■ An update



Asbestosis: Number of deaths, crude and age-adjusted death rates, U.S. residents age 15 and over, 1968–2014



Asbestosis: Mortality

Table 1. **Asbestosis** Most frequently reported **asbestos** death certificate, U.S. residents age 15 and over, selected states and years, 1989

ICD-9 Industry	Number of Deaths	Percent
880 Construction	101	21.9
380 Ship and boat building and repairing	171	6.9
130 Industrial and miscellaneous chemicals	128	6.3
450 Railroads	49	3.1
300 Miscellaneous occupations in essential and minor products	79	3.8
901 General government, n.e.c.	71	3.2
230 Meat, fish, and seafood, slaughtering and dressing, and related occupations	67	3.2
510 Non-specified manufacturing industries	46	2.1
440 Laundry, light and power	39	1.9
441 Secondary and secondary schools	31	1.8
All other industries	1,296	49.6
Industry not reported	101	3.7
TOTAL	2,469	100.0

NOTE: Industry codes are based on the 1980 Census. The 1980 Census was used to calculate the age-adjusted death rate. The age-adjusted death rate is calculated by applying the age-specific death rates for asbestosis to the standard U.S. population in 1989. The age-adjusted death rate is expressed per 100,000 population. The age-adjusted death rate is based on the 1989 U.S. population. The age-adjusted death rate is based on the 1989 U.S. population. The age-adjusted death rate is based on the 1989 U.S. population.

Table 1. **Asbestosis** Most frequently reported **asbestos** death certificate, U.S. residents age 15 and over, selected states and years, 1989

ICD-9 Occupation	Number of Deaths	Percent
300 Physicians, surgeons, and dentists	219	4.3
610 Managers and administrators, n.e.c.	134	6.4
710 Electricians	123	4.4
600 Clericals	119	4.2
300 Installation workers	100	3.8
800 Laborers, except construction	93	2.3
440 Superintendents, production occupations	91	3.9
700 Publicity and artists	74	2.7
470 Nurses and nursing	74	2.5
800 Truck drivers	47	2.3
All other occupations	1,424	57.3
Occupation not reported	101	3.4
TOTAL	2,469	100.0



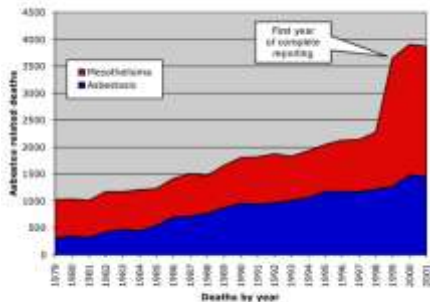
Malfunction Mechanisms: Mortality

Table 1. **Malfunction mechanisms** Most frequently reported **asbestos** death certificate, U.S. residents age 15 and over, selected states, 1989

ICD-9 Industry	Number of Deaths	Percent
1300 Construction	97	21.2
960 Non-paid family or non-member of own household	88	7.6
642 Elementary and secondary schools	80	2.7
142 Industrial and miscellaneous chemicals	69	7.9
901 General government, n.e.c.	53	2.9
100 Agricultural products, crops	41	5.6
100 Non-specified manufacturing industries	40	3.6
400 Fisheries	4	0.7
811 Hospitals	4	0.7
All other industries	366	86.0
Industry not reported	15	3.3
TOTAL	451	100.0

NOTE: Industry codes are based on the 1980 Census. The 1980 Census was used to calculate the age-adjusted death rate. The age-adjusted death rate is calculated by applying the age-specific death rates for asbestosis to the standard U.S. population in 1989. The age-adjusted death rate is expressed per 100,000 population. The age-adjusted death rate is based on the 1989 U.S. population. The age-adjusted death rate is based on the 1989 U.S. population.

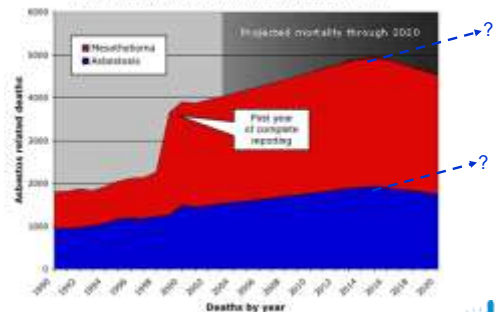
Deaths From Asbestos Diseases are Increasing



Source: DRII Action Fund. Compiled from datasets for National Center for Health Statistics (NCHS), multiple years of death by 1978-2001. Does not include asbestos-related mortality from lung or gastrointestinal cancer.



Asbestos mortality will likely peak around 2015 reflecting heavy exposures in the 1970s



Long Term Health

Table 18-4. **Occupational mortality** (PMR) adjusted for age, sex, and race by industry, U.S. residents age 15 and over, selected states, 1989



ICD-9 Industry	Number of Deaths	PMR	95% Confidence Interval	95% Lower	95% Upper
000	119	1.0	-	-	-
010	13	1.3	0.2	0.3	2.3
020	35	1.3	0.5	0.7	1.9
030	40	1.3	0.6	0.8	2.0
040	10	1.0	0.1	0.1	1.9
050	20	1.3	0.3	0.5	2.1
060	10	1.3	0.2	0.2	2.4
070	10	1.3	0.2	0.2	2.4
080	10	1.3	0.2	0.2	2.4
090	10	1.3	0.2	0.2	2.4
100	10	1.3	0.2	0.2	2.4
110	10	1.3	0.2	0.2	2.4
120	10	1.3	0.2	0.2	2.4
130	10	1.3	0.2	0.2	2.4
140	10	1.3	0.2	0.2	2.4
150	10	1.3	0.2	0.2	2.4
160	10	1.3	0.2	0.2	2.4
170	10	1.3	0.2	0.2	2.4
180	10	1.3	0.2	0.2	2.4
190	10	1.3	0.2	0.2	2.4
200	10	1.3	0.2	0.2	2.4
210	10	1.3	0.2	0.2	2.4
220	10	1.3	0.2	0.2	2.4
230	10	1.3	0.2	0.2	2.4
240	10	1.3	0.2	0.2	2.4
250	10	1.3	0.2	0.2	2.4
260	10	1.3	0.2	0.2	2.4
270	10	1.3	0.2	0.2	2.4
280	10	1.3	0.2	0.2	2.4
290	10	1.3	0.2	0.2	2.4
300	10	1.3	0.2	0.2	2.4
310	10	1.3	0.2	0.2	2.4
320	10	1.3	0.2	0.2	2.4
330	10	1.3	0.2	0.2	2.4
340	10	1.3	0.2	0.2	2.4
350	10	1.3	0.2	0.2	2.4
360	10	1.3	0.2	0.2	2.4
370	10	1.3	0.2	0.2	2.4
380	10	1.3	0.2	0.2	2.4
390	10	1.3	0.2	0.2	2.4
400	10	1.3	0.2	0.2	2.4
410	10	1.3	0.2	0.2	2.4
420	10	1.3	0.2	0.2	2.4
430	10	1.3	0.2	0.2	2.4
440	10	1.3	0.2	0.2	2.4
450	10	1.3	0.2	0.2	2.4
460	10	1.3	0.2	0.2	2.4
470	10	1.3	0.2	0.2	2.4
480	10	1.3	0.2	0.2	2.4
490	10	1.3	0.2	0.2	2.4
500	10	1.3	0.2	0.2	2.4
510	10	1.3	0.2	0.2	2.4
520	10	1.3	0.2	0.2	2.4
530	10	1.3	0.2	0.2	2.4
540	10	1.3	0.2	0.2	2.4
550	10	1.3	0.2	0.2	2.4
560	10	1.3	0.2	0.2	2.4
570	10	1.3	0.2	0.2	2.4
580	10	1.3	0.2	0.2	2.4
590	10	1.3	0.2	0.2	2.4
600	10	1.3	0.2	0.2	2.4
610	10	1.3	0.2	0.2	2.4
620	10	1.3	0.2	0.2	2.4
630	10	1.3	0.2	0.2	2.4
640	10	1.3	0.2	0.2	2.4
650	10	1.3	0.2	0.2	2.4
660	10	1.3	0.2	0.2	2.4
670	10	1.3	0.2	0.2	2.4
680	10	1.3	0.2	0.2	2.4
690	10	1.3	0.2	0.2	2.4
700	10	1.3	0.2	0.2	2.4
710	10	1.3	0.2	0.2	2.4
720	10	1.3	0.2	0.2	2.4
730	10	1.3	0.2	0.2	2.4
740	10	1.3	0.2	0.2	2.4
750	10	1.3	0.2	0.2	2.4
760	10	1.3	0.2	0.2	2.4
770	10	1.3	0.2	0.2	2.4
780	10	1.3	0.2	0.2	2.4
790	10	1.3	0.2	0.2	2.4
800	10	1.3	0.2	0.2	2.4
810	10	1.3	0.2	0.2	2.4
820	10	1.3	0.2	0.2	2.4
830	10	1.3	0.2	0.2	2.4
840	10	1.3	0.2	0.2	2.4
850	10	1.3	0.2	0.2	2.4
860	10	1.3	0.2	0.2	2.4
870	10	1.3	0.2	0.2	2.4
880	10	1.3	0.2	0.2	2.4
890	10	1.3	0.2	0.2	2.4
900	10	1.3	0.2	0.2	2.4
910	10	1.3	0.2	0.2	2.4
920	10	1.3	0.2	0.2	2.4
930	10	1.3	0.2	0.2	2.4
940	10	1.3	0.2	0.2	2.4
950	10	1.3	0.2	0.2	2.4
960	10	1.3	0.2	0.2	2.4
970	10	1.3	0.2	0.2	2.4
980	10	1.3	0.2	0.2	2.4
990	10	1.3	0.2	0.2	2.4



TODAY, EARLY MORTALITY FROM ASBESTOS DISEASE IS MAINLY A CONSTRUCTION INDUSTRY PROBLEM DUE TO OCCUPATIONAL EXPOSURE TO ASBESTOS IN BUILDINGS.

THE HEAVY EXPOSURE FROM MANUFACTURING AND APPLICATION ENDED BY ABOUT 1980.


THE ON-GOING PROBLEM IS ASBESTOS IN PLACE IN BUILDINGS – MILLIONS UPON MILLIONS OF PUBLIC, COMMERCIAL, INDUSTRIAL AND RESIDENTIAL BUILDINGS IN THE UNITED STATES.





EPA NESHAP

National Emissions Standard
for Hazardous Air Pollutants

40 CFR 61 Subpart M

- MAJOR REQUIREMENTS
Before Demolition or Renovation
- RACM
- INSPECT TO IDENTIFY ALL ASBESTOS
 - NESHAP NOTIFICATION TO EPA
 - REQUIRED REMOVAL BEFORE DISTURBANCE
 - PROPER PROCEDURES FOR REMOVAL
 - PROPER WASTE DISPOSAL
 - WASTE SHIPMENT RECORDS
- 

NESHAP Facilities

ALL STRUCTURES, INSTALLATIONS,
OR BUILDINGS EXCEPT RESIDENTIAL
THROUGH 4 UNITS

INCLUDES SHIPS, WASTE
SITES, PIPELINES, AND
JUST ABOUT EVERYTHING
ELSE








REGULATED COMMUNITY





WASTE GENERATOR:
THE OWNER/OPERATOR OF A
FACILITY PRODUCING
ASBESTOS CONTAINING
WASTE MATERIAL (ACWM)

(It's the building owner and the contractor)



REGULATED ACTIVITIES

DEMOLITION OR RENOVATION
IMPACTING OR CAUSING REGULATED
ASBESTOS CONTAINING MATERIAL

→ (RACM) ←



ASBESTOS INSTITUTE

REGULATED ASBESTOS CONTAINING MATERIAL

- FRIABLE and TSI ACM
 - Fireproofing
 - Popcorn Ceilings
 - Sprayed-on Acoustical
 - Pipe Insulation
 - Boiler Insulation
 - Duct Insulation
- Any Non-Friable that has deteriorated so that it may be pulverized or powdered by hand pressure
- Any Non-Friable that is sanded, ground or abraded mechanically

ASBESTOS INSTITUTE

NON-FRIABLE ACM CATEGORIES

CATEGORY I NON-FRIABLE

RESILIENT/PLIABLE ASPHALTIC ROOFING,
VINYL FLOORING, PACKINGS, AND
GASKETS, *IN GOOD CONDITION*

CATEGORY II NON-FRIABLE

ALL THE OTHER NON-FRIABLE
MATERIALS *IN GOOD CONDITION*

These materials are not regulated by the EPA NESHAP

ASBESTOS INSTITUTE

THRESHOLD AMOUNTS OF RACM FOR DEMOLITION OR RENOVATION

260 LINEAR FEET ON PIPE

160 SQUARE FEET ON ALL OTHER SURFACES

**35 CUBIC FEET IF UNABLE TO MEASURE
IN PLACE (i.e.. Waste Pile or Debris)**

**RENOVATION BELOW THRESHOLD:
NO REGULATION**

**DEMOLITION BELOW THRESHOLD:
DEMO NOTIFICATION ONLY**

ASBESTOS INSTITUTE

NESHAP APPLICABILITY

DEMOLITION

- NOTIFICATION
- REQUIRED REMOVAL
- WET METHODS
- TRAINED PERSON
- LEAK-TIGHT WASTE
- LABELING
- PROPER DISPOSAL

INSPECTION

RENOVATION

- NOTIFICATION
- REQUIRED REMOVAL
- WET METHODS
- TRAINED PERSON
- LEAK-TIGHT WASTE
- LABELING
- PROPER DISPOSAL

RACM: 260 Linear Ft. 160 Square Ft. 35 Cubic Ft.

DEMO NOTIFICATION
(even with no asbestos)

NO REGULATION

ASBESTOS INSTITUTE

61.150 WASTE DISPOSAL:

- (a) No visible emissions
 - Adequately wet
 - Leak-tight containers
 - Label containers
 - Cat. I and Cat. II exemptions
- (b) Disposal at approved site ASAP
 - Cat. I exemption (and Cat. II)
- (c) Mark waste vehicles loading & unloading
- (d) Waste Shipment Record for transport off generator site
- (e) WSR available upon request

ASBESTOS INSTITUTE

Transite Pipe



Transite

The Asbestos Institute (Quebec, Canada) reports that Chrysotile cement represents between 85 and 90% of the market for Chrysotile asbestos, and that 23 million metric tons of asbestos was used in Europe for post war construction. It follows that the installed base of asbestos cement products worldwide is enormous and continues to grow. In other words, the problem of exposure to asbestos fibers from working with these materials is substantial, and will remain significant for the foreseeable future.



Transite Pipe Issues

1. NESHAP
 1. Demolition vs Renovation
 2. Category II vs RACM
 3. Waste handling
 - a. Regulations vs Best Work Practices
 2. OSHA
 1. Class II Work
 2. Class III Work
 3. Training
 4. Competent Person
 - a. NEA
 - b. Regulated Area
 - c. Work Procedures
- Major OSHA Compliance Inspection Issues:
- NEA
 - Work Procedures
 1. Wet
 2. HEPA-vac
 3. Prompt containing of waste
 - Notification of Hazards
 - Training



PROHIBITIONS

- Do not crush or make friable
- Do not use pipe bursting
- Do not use pipe reaming
- Do not use a "chop saw"
- Do not leave broken pipe in the trench
- Do not make Category II Non-friable into RACM
- Do not make Brian mad!!!

Complying with these rules will avoid NESHAP applicability



REQUIREMENTS

- Have a Competent Person
- Develop a Negative Exposure Assessment
- Get training for employees
- Regulate the area
- Always use wet methods
- Contain the broken pieces in a container
- Label the container (use a labeled bag)

These are OSHA requirements, and they are not burdensome. They are for your protection.



The best way I know to disturb transite pipe:



ARIZONA OSHA PROGRAMS

Compliance
Consultation
Training



Compliance vs Consultation

Compliance

- 5 reasons that warrant an inspection:
 - Fatality
 - Complaint
 - Referral
 - Emphasis
 - Program Planned
- Citations are issued-2 types
 - Non-serious vs. Serious
- Asbestos
 - 29 CFR 1910.1001
 - 29 CFR 1926.1101
 - Other standards to comply with when working with asbestos
 - www.osha.gov



Consultation

- FREE consultation services (on-site surveys, program development, safety and health literature, construction partnerships, Recognition programs, and training)
- Don't issue citations. They are there to help you.
- 3 types of programs:
 - SHARPS (Safety and Health Achievement Recognition Program)- General Industry and Construction with fewer than 250 employees
 - VPP (Voluntary protection Program)- larger companies
 - RRAP (Rate reduction awareness program) - For general industry and Construction



Training

- FREE Training and advice
- Training
 - Jenny Mandeville (602) 542-1640
- Consultation Services
 - (602) 542-1769
- ADOSH Advocate (Quarterly newsletter)
 - <http://www.azii>



OSHA ISSUES



A common comment:

'I thought that the asbestos regulations had gone away. Hasn't the use of asbestos been banned by the government for the last 20 years?'

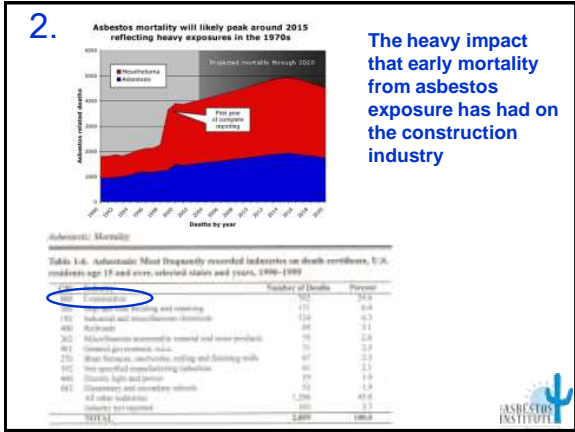
3 reasons why we can expect the OSHA asbestos regulations to continue, and perhaps become more stringent, not less: →



1. All the buildings contain ACM

Millions upon millions of buildings:
public, commercial, industrial
and residential





3. ASBESTOS PRODUCTS CURRENTLY USED IN NEW CONSTRUCTION

Imported construction materials

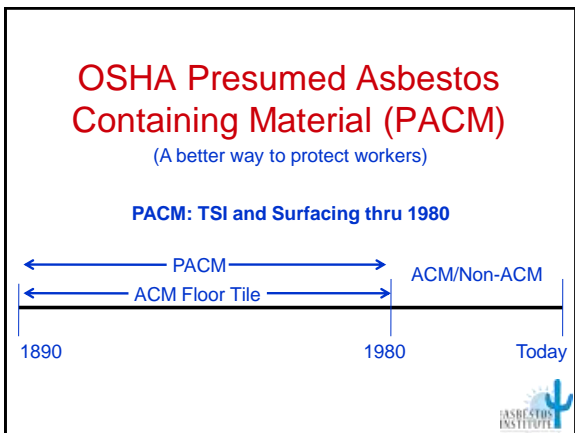
- Transite pipe
- VAT
- Roof sealant / Paint
- Fiber for masonry work
- Gaskets

OSHA

Asbestos Regulations For The Construction Industry

Main Intent of OSHA Regs: No Exposure

PEL ———— Exposure 0.1f/cc TWA
No Exposure 1.0f/cc EL



First of all, the OSHA regulation on asbestos in the construction industry is directed to owners and employers involved in “Construction” as defined by paragraph (a) in 29 CFR 1926.1101: “Scope and application”.

It is not a regulation directed only to the “asbestos abatement” industry as a specialty contractor group!

It is a pro-active regulation that requires controls to keep "construction" employees safe when working on a site that contains ACM or asbestos.

Most of the controls required are in lieu of measured airborne asbestos exposure.

THEY ARE TO KEEP ASBESTOS EXPOSURE FROM HAPPENING.



The pro-active requirements are:

1. Competent Person in control of work site.
2. Identify asbestos at a site before work begins.
3. Notify those in control.
4. Regulated areas for any disturbance.
5. Negative Exposure Assessments for all work.
6. Specified work practices for all work.
7. PPE for Class I Work.
8. Decontamination for Class I Work.



9. Signage and labeling for ACM.
10. Training of employees.
11. Medical Surveillance for respirator use.

These controls are required because of ACM in the work project – not because there has already been exposure.

These are required controls to keep asbestos exposure from happening.

They are necessarily pro-active.



CLASSES OF WORK

DEFINITIONS

Class I Work	The <u>removal</u> of TSI, fireproofing or popcorn
Class II Work	The <u>removal</u> of anything else
Class III Work	The small scale, short duration <u>disturbance</u> of ACM
Class IV Work	<u>Contact</u> , but no disturbance, or <u>cleanup</u> of previously generated debris

CLASSES OF WORK

APPLICATION

Class I Work	Competent Person In All Classes	Requires NPE or glovebags, shower decon, full PPE, certified people, air monitoring, Negative Exposure Assessment (NEA)
Class II Work		No initial NPE, NEA exemptions for shower decon, PPE, certified workers, air monitoring. One day training.
Class III Work		Requires PPE for TSI & Surfacing, NEA exemptions for all other ACM. Two day training. SS, SD only.
Class IV Work		Requires NEA, all exemptions allowed. 2 hour training required.



CONTRACTOR ISSUES

The Permissible Exposure Limit:

- TWA 0.1 f/cc
- EL 1.0 f/cc

Comply with all the pro-active requirements.

Do not allow workers to be "exposed".



BUILDING OWNER ISSUES

- PACM: TSI & Surfacing thru 1980
- Resilient Flooring thru 1980
- Due diligence responsibility
- Notifications
- Recordkeeping.



(k) COMMUNICATION OF HAZARDS

WORKER TRAINING:

- CLASS I: AHERA Worker Accreditation
- CLASS II: 8 hr. specific
- CLASS III: AHERA 16 hr. O & M
- CLASS IV: AHERA 2 hr. awareness



Training required prior to work and annually thereafter.

The main issues of non-compliance likely to be cited are:

NEA

3 basic work controls

Notification

Training



(q) DATES

The final rule became effective
October 1, 1995

The regulated community is in either compliance or non-compliance as of that date.



Training and Work Practices



OSHA and EPA Training and Work Requirements for Individuals Performing Asbestos Work

OSHA (and some EPA)

Training
And
Work Practices



WORK PRACTICES

EPA NESHAP (RACM)

- Thorough Inspection
 - Notification
- No visible emissions
- Certified Supervisor
 - Wet
 - Contain waste
- Label waste container
 - NESHAP Landfill

EPA AHERA (Response Action)

- Specifications
- Certified Supervisor
- Certified Worker
- Final Clearance



OSHA

(g) Methods of Compliance:

- (g)(1) Wet methods, HEPA Vac, Prompt containment of waste
- (g)(2) What to do if PEL is exceeded
- (g)(3) Prohibitions
- (g)(4) Class I Removal: Basic requirements
- (g)(5) 6 Specific Control Methods (OSHA specs)
- (g)(6) Alternative Controls for Class I (Contractor specs)
- (g)(7) Class II Removal: Basic requirements
- (g)(8) Class II control methods by material (OSHA specs)
- (g)(8)(vi) Alternative Controls for Class II (Contractor specs)



TRAINING

OSHA: 29 CFR 1926.1101(k)(9): Removal of ACM

Class I Work: EPA/Cal-OSHA Certified Supervisor and Worker

Class II Work: EPA/Cal-OSHA Certified Supervisor and OSHA Worker

EPA: 40 CFR 61.145(c)(8): RACM above threshold:

EPA/Cal-OSHA Certified Supervisor

EPA: 40 CFR 763 appendix C: Response Action Work:



AHERA Training

- Asbestos Inspections → AHERA Asbestos Building Inspector (24 Hrs.)
- Management Plans → AHERA Management Planner (16 Hrs.)
- Design Project Specifications → AHERA Project Designer (32 HRS.)
- Supervisors → AHERA Contractor/Supervisor (40 Hrs.)
- Workers → AHERA Worker (32 Hrs.)



OSHA Training Requirements

Class of Work	Employee	Competent Person
Class I	32 Hour AHERA Certified Worker	40 Hour AHERA Contractor/Supervisor
Class II	8 Hour OSHA Specific Training	40 Hour AHERA Contractor/Supervisor
Class III	16 Hour O&M Training	16 Hour O&M Training
Class IV	2 Hour Awareness	16 Hour O&M Training



EPA NESHAP Training

- The Asbestos NESHAP states that:
 - No RACM shall be stripped, removed or otherwise handled or disturbed in a facility unless at least one on-site representative trained in the provisions of this regulation is present (paraphrased)
 - EPA has stated that the Trained On-site Representative is an individual trained as an AHERA Contractor/Supervisor



Summary

- OSHA and EPA require training at some level for all asbestos work
- Asbestos work includes all work from large abatement activities to maintenance/custodial activities where employees do not disturb ACM but work in the vicinity of ACM
- Properly trained employees are an owners and an employers best insurance against liability on their work site



AHERA COMPLIANCE

40 CFR 763, Subpart E

For Public, Private and Charter Schools



Regulatory Responsibility

- Basic regulatory responsibility lies with the Local Education Agency (LEA)..... which means the school owner.
- “LEA’s may contractually delegate their duties under this rule, but they remain responsible for the proper performance of those duties.” [743.80(a)]

MAJOR OBJECTIVES OF AHERA

1. IDENTIFICATION OF ALL ACBM for the purpose of:
2. ASSESSMENT OF FRIABLE & TSI ACBM so that ACBM may be:
3. MANAGED SAFELY IN THE BUILDING



AHERA FACILITIES: SCHOOLS

- KINDERGARTEN - 12
- PUBLIC AND PRIVATE
- NOT FOR PROFIT
- CHARTER SCHOOLS



AHERA REQUIREMENTS

40 CFR 763

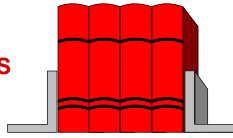
- 763.84: BUILDING OWNER RESPONSIBILITIES
- .85: INSPECTIONS AND REINSPECTIONS
 - .86: SAMPLING
 - .87: ANALYSIS
 - .88: ASSESSMENTS
 - .90: RESPONSE ACTIONS
 - .91: OPERATIONS AND MAINTENANCE
 - .92: TRAINING AND PERIODIC SURVEILLANCE



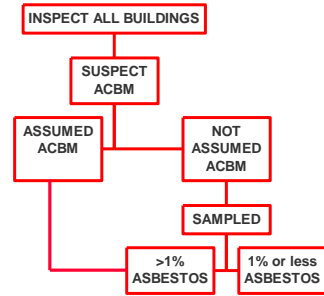
AHERA REQUIREMENTS 40 CFR 763 (cont.)

763.93: MANAGEMENT PLANS

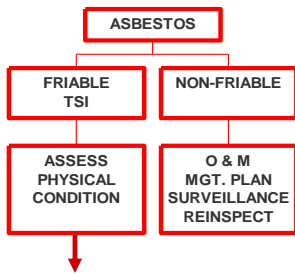
- . 94: RECORDKEEPING
- .95: WARNING LABELS
- .97: COMPLIANCE AND ENFORCEMENT
- .98: WAIVER
- .99: EXCLUSIONS



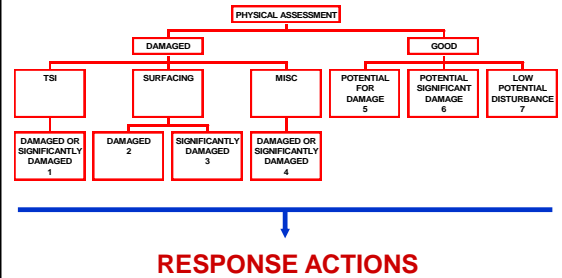
A PICTURE OF AHERA



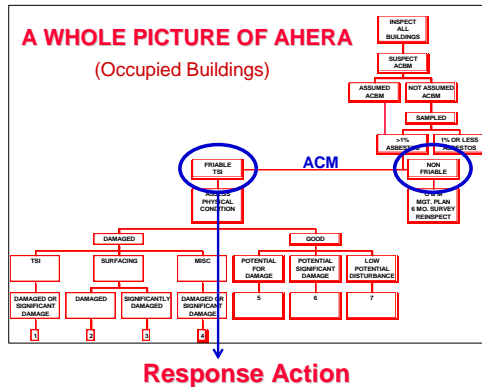
A PICTURE OF AHERA (cont.)



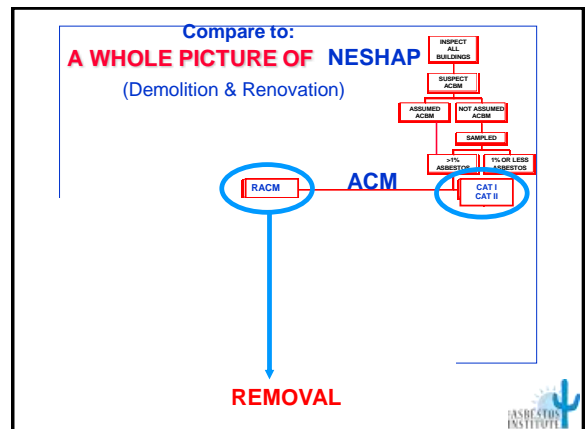
A PICTURE OF AHERA (cont.)



A WHOLE PICTURE OF AHERA (Occupied Buildings)



Compare to: A WHOLE PICTURE OF NESHAP (Demolition & Renovation)



AHERA REGULATORY CONCEPTS

- ACCREDITATION
- ASBESTOS INSPECTION PROTOCOL
- NVLAP CERTIFIED LABORATORIES
- FORMAL PROJECT DESIGN
- RESPONSE ACTIONS
- O & M PROGRAMS
- FINAL CLEARANCE



Thank You For Your Attention

Please feel free to contact any of our speakers for help with asbestos questions or regulations.

